ABSTRACT OF THE DISCLOSURE

A system for real-time signal processing for vehicle monitoring, including a first device disposed in a tire of a vehicle and producing a signal that is a function of a tire contact time period, during which a point at the tire circumference stays in contact with the ground, and a second device operative to repetitively perform a first task of processing the signal to calculate the tire contact time period at a first predetermined rate, and to repetitively perform a second task of calculating a tire load based at least in part upon the calculated tire contact time period at a second predetermined rate, wherein said second predetermined rate is less than said first predetermined rate.